

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANTS: Kahola CONF. NO. : 9268  
SERIAL NO.: 10/033,451 ART UNIT: 2129  
FILING DATE: 19 March 2004 EXAMINER: Omar F. Rivas  
TITLE: METHOD FOR PERFORMING LINK ADAPTATION  
ATTORNEY DOCKET NO.: 460-010813-US(PAR)

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

**I. INTRODUCTION**

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. Reconsideration of the rejection of the claims is respectfully solicited in light of the following remarks.

**II. REMARKS**

The Examiner has not established that the subject matter claimed in this application is obvious under 35USC103(a) based on the combined teachings of the reference Agrawal, La Porta, and Lewis.

It is well settled that in order to establish a prima facie case for obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed

combination and the reasonable expectation of success must both be found in the prior art, without reference to the disclosure of this application. (MPEP Sec. 2142).

The examiner relies primarily on the disclosure of the cited reference Agrawal to support the rejection based on obviousness. The cited reference Agrawal fails to disclose or suggest the selection of a modulation mode. The cited reference fails to disclose or suggest the use of fuzzy logic in any manner. The cited reference fails to disclose or suggest a fuzzy logic selection process using packet error rate. The cited reference fails to disclose or suggest the transfer of packets comprising a header and a payload.

To reduce system overhead costs, the system of Agrawal controls the frequency of feedback by balancing channel quality against control overhead. To accomplish this, the system of Agrawal monitors word error rate over a window of timeframes to determine an average word error rate. It is only when the average word error rate falls outside the acceptable range that the transmission power is updated (see column 8, lines 3-38). The control parameter in this system is defined as a power code pair, i.e., transmission power and error correction code and these parameters are controlled to determine the correct operating point for current link conditions.

When, in the system of the subject application, modulation mode is selected, the process involves data speed, modulation method, coding rate and other parameters. Significantly different parameters are involved in the system of Agrawal, namely, only transmission power and/or error code. The reference Agrawal, therefore, does not teach the selection of modulation mode.

The Examiner acknowledges that the cited reference Agrawal fails to teach the selection of modulation modes using fuzzy logic and cites the reference Lewis, indicating that it would be obvious to one skilled in the art to adopt fuzzy logic principals, as taught in Lewis, to the system of Agrawal. As motivation for such a combination, the examiner suggests that fuzzy logic would provide a more flexible approach to the selection of the power code pair in Agrawal. Applicant submits

that, by virtue of the selection of the power code pair in Agrawal, a more flexible approach is not needed and will be contrary to the stated purpose of Agrawal, namely to limit the overhead resources needed for the selection process. There is, therefore, nothing in the reference Agrawal to suggest that, the incorporation of the teaching of Lewis within the system of Agrawal would be advantageous and quite the contrary, if anything Agrawal teaches away from such a combination. There is nothing in the reference Lewis to suggest the use of fuzzy logic in the selection of modulation mode according to the claims of this application.

The Examiner further acknowledges that Agrawal does not teach forming packets from the information to be transferred wherein the packets comprise a header and payload. In response to this deficiency, the Examiner suggests that a person skilled in the art would form such packets based on the cited reference La Porta. Applicant submits that it is well known to form a packet having a header and a payload to include sufficient identification of the packet to enable routing of the packet from network element to network element and to different networks. It is this structure of a packet that supports Applicants position that word error rate, according to Agrawal, is not the equivalent of packet error rate as used in the subject application. The term "packetization", as used in Agrawal, does not have the significance that the Examiner places on it.

The Examiner has steadfastly clung to the position that the term "word error rate" is the equivalent of "packet error rate". Applicant submits that this assertion is erroneous. It appears that the only definition of "word error rate" in the context of digital transmission is in the reference Agrawal. The Examiner relies on the following sentence at column 1, lines 54-55, as follows:

**"Data transmission is usually packetized into words so that the error granularity is at the word level."**

However, the Examiner seems to ignore the next sentence which defines "word error rate" in terms of "BER" or bit error rate.

The Examiner has acknowledged the content of articles submitted by Applicant and further stated his position as follows:

**"The articles talk about bit error rate and how they differ from packet error rate. However, they are silent about word error rate as described in the Agrawal reference. Packet error rate as described by Applicant and word error rate as described by Agrawal are directed to the same thing, the information units being transmitted through the network. Therefore packet error rate and word error rate would be considered equivalent by a person skilled in the art."**

Applicant submits that the definition of the term "word error rate", as used in Agrawal, is not subject to speculation, but is contained in formula (2) at column 1, line 60. Agrawal states:

**"Consequently the error rate of interest is the,... (see formula 2)... word error rate (WER) as seen at the receiver.**

It is significant that Formula 2 is stated in terms of BER. Applicant submits that WER in Agrawal is more or less the equivalent of bit error rate, not packet error rate. Accordingly, the reference Agrawal fails to support the Examiner's position.

Applicant submits that the above described deficiencies of the primary reference Agrawal are not remedied by the proposed combination with the teaching of the references La Porta and Lewis. The combined references do not therefore support a prima-facie case of obviousness. The modification of the teachings of La Porta and Lewis, in order to obtain the invention, as described in the claims submitted herein, would not have been obvious to one skilled in the art.

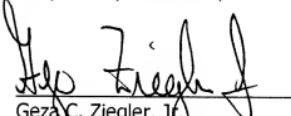
The above arguments apply equally to independent claims 12, and 15-17 as well as the rejected dependent claims.

The above remarks present the most significant issues joined in the prosecution of this application. Applicant reserves the right to make further remarks with respect to collateral issues and references involving specific dependent claims in the event this application proceeds to a full appeal.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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